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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,787	11/20/2001	Kaisa Rikkinen	3865/0J998	1597

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EXAMINER

ROY, SIKHA

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/989,787

Applicant(s)

RIKKINEN ET AL.

Examiner

Sikha Roy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

As provided in 37 CFR 1.77(b) the specification must include following sections each with proper heading such as: Title of the Invention, Background of the Invention, Brief Summary of the Invention, Brief Description of the Drawings, Detailed Description of the Invention, Claims and Abstract.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 6, 8, 9, 11, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,741,976 to Eguchi et al.

Regarding claim 1 Eguchi discloses (column 3 lines 24-55, column 24 lines 45-55, Fig. 1) electroluminescent device comprising an electroluminescent light source with two luminescent layers 4 between electrodes 1 and 3 and luminescent layer 5 between electrodes 2 and 3 with electroluminescent function. Eguchi further discloses the material used for the two luminescent layers (4 and 5) is same and hence light produced from the two layers is same.

Claims 8 and 14 essentially recite the same limitations as of claim 1 and hence are rejected for the same reason.

Regarding claim 2 Eguchi discloses (column 24 line 49-52) two luminescent layers can use the same light emitting agent.

Regarding claim 4 Eguchi discloses (column 1 lines 29 –31) the electroluminescent light source (EL device) can be used for illuminating display for display of lines, figures and images in different shapes and sizes.

Regarding claim 6 Eguchi discloses (column 23 lines 28-35) by use of two luminescent layers 4 and 5, the voltages between the electrodes 1 and 3 and between the electrodes 2 and 3 the luminance of each layer can be individually controlled to vary the intensity of light emitted from the source.

Claim 9 recites the same limitation as of claim 2 and hence is rejected for the same reason.

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Claim 11 recites the same limitations as of claim 4 and hence is rejected for the same reason.

Regarding claim 15 Eguchi discloses (column 23 lines 21-35 Fig.1) an electroluminescent light source comprising first electrode 2, second electrode 3 and a background electrode 1, conducting operating voltage (applying direct current, alternating current or pulse voltage) applied between the electrodes 1 and 3 and between electrodes 2 and 3, first luminescent layer 4 placed between electrode 3 and background electrode 1 and second luminescent layer 5 placed between the electrode 3 and electrode 2. The limitation reciting means for conducting operating voltages to the electrodes is inherent to the EL device.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,741,976 to Eguchi et al.

Referring to claim 5 Eguchi does not explicitly disclose the use of the electroluminesce light source for illuminating keyboard.

Eguchi discloses (column 1 lines 29-31) use of the electroluminesce light source for illuminating display for lighting different figures. As keyboards configure illuminated display of numbers and letters it would have been obvious to one of ordinary skill in the art at the time of invention to include the use of the electroluminescent light source of Eguchi for illuminating keyboards.

Claim 12 recites the same limitation as of claim 5 and hence is rejected for the same reason.

Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,741,976 to Eguchi et al. and further in view of JP 2000-252073 A to Yoneda.

Claim 3 differs from Eguchi in that Eguchi does not exemplify second luminescent layer generating a change in color generated by the first luminescent layer wherein in the first luminescent layer a conversion agent is used.

Yoneda in analogous art of electroluminescent lamp using multilayer structure discloses the use of color conversion agent (fluorescent pigment 5b) in the second luminous layer 5 (Fig.1) yielding change in luminescent color from the first luminous layer 2. Yoneda further discloses that by mixing fluorescent pigment in the first luminous layer 2 the color emitted can be made different. This color conversion agent in a luminous layer provides a notable change in the color mixture of the luminescence of colors emitted from first layer 2 and second layer 5.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the first luminous layer 4 of the electroluminescent device of

Eguchi containing a conversion agent as taught by Yoneda for providing a notable change in the color mixture of the luminescence of colors emitted from first layer and second layer.

Regarding claim 10 Yoneda discloses the luminescent layers made of phosphorus such as ZnS:Cu as emitter.

Claims 7, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,741,976 to Eguchi et al. in view of U.S. Patent 6,157,138 to Anderson and further in view of U.S. Patent 5,336,978 to Alessio.

Regarding claim 7 Eguchi discloses (column 25 lines 44-50) that each of the two luminescent layers can independently be controlled and the intensity of luminescence from the lamp can be controlled by controlling the intensity of individual layers.

Claim 7 differs from Eguchi in that Eguchi does not exemplify the adjustment of the light intensity in the lamp used for illuminating a portable device automatically on the basis of required illumination.

Anderson in the same field of endeavor of apparatus for illuminating electroluminescent lamp discloses use of EL lamps in portable battery operated electronic devices for their compact size and low current consumption. Anderson discloses (Fig. 1 column 2 lines 45-60, column 3 lines 1-32) power source 30, transistor switches coupled to the EL lamp and control logic 20 controlling the switching states of the switches and hence selectively controlling the voltage levels provided across the two electrodes of the EL device 12.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include the control logic circuit with switches across the voltage supplies of the electrodes of the electroluminescent light source of Eguchi as disclosed by Anderson for adjusting the intensity of the lamp which can be used in a portable electronic device.

Alessio in pertinent art of drive circuit for electroluminescent lamps discloses (Fig. 7 column 6 lines 55-68, column 8 lines 1,2 claims 2,6) electroluminescent lamp 10 which includes a photosensitive device optically coupled to the device. The light responsive sensor provides signal commensurate with the intensity of light generated by the lamp. Alessio discloses this circuit with light sensor permits the automatic adjustment of the output voltage and hence output intensity of the lamp.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include a light sensor which would provide signal commensurate with the illumination of the surrounding space as suggested by Alessio in the driving circuit for the electroluminescent lamp of Eguchi and Anderson for automatically adjusting the light intensity of the lamp.

Referring to claim 13 Anderson discloses (column 1 lines 10-15) that the EL devices can be used in cellular telephones, a wireless communication device.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,476,552 to Yoneda and JP 2000277258 A to NEC



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Kansai Ltd. disclose electroluminescent light source with two luminescent layers. U.S.

Patent 6,541,921 to Luciano et al. discloses illumination intensity control circuit for electroluminescent display.

***Contact Information***

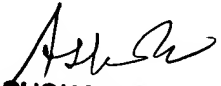
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (703) 308-2826. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.R.

Sikha Roy  
Patent Examiner  
Art Unit 2879

  
ASHOK PATEL  
PRIMARY EXAMINER